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Working as a Mountaineer in Antarctica

40 years in the making

Todd and Donette Swain



Editor's note: Todd and Donette Swain wrote this piece together. The narrator is Todd.

CIRCA 1977 I ASKED MARC LEVESQUE FOR HELP IN CLIMBING, which I'd just started. I was 17 and lived in New Hampshire. Marc chaired the mountaineering section of the Appalachian Mountain Club's New Hampshire Chapter. My time with him and other members laid the foundation for decades of climbing adventures all over the world.

Marc told me he had worked in Antarctica. Not only had he lived through the challenging conditions of austral summer, he had stayed through a long winter season. I had never heard of anyone visiting the far-flung continent, let alone working there. I immediately added working in Antarctica to my life list.

For the next 39 years, I led what many would call an adventurous life. I guided climbers all over the northeastern United States, Scotland, and California. I worked as a climbing ranger in the Shawangunks in New York, a favorite haunt of AMC climbers from every chapter. I worked as a ranger and in other capacities for the National Park Service for 29 years. Throughout, I continued to climb and seek adventure on six of the seven continents.

In 2015, my wife, Donette, and I went climbing in Alaska, where we met Alasdair Turner, who told us he was splitting his year between guiding in Alaska and working in Antarctica as a field safety coordinator (that is, a mountaineer). Suddenly my desire to go to Antarctica revived. Armed with information from Alasdair, I applied for a field safety coordinator position for the 2016–2017 austral summer (which coincides with North America's winter). Scientists who study glaciers need field safety coordinators to keep them from falling into crevasses. A mountaineer working with glacier teams in Antarctica must pass background, dental, and physical checks.

The National Science Foundation oversees the U.S. Antarctic Program. NSF staffers, contract workers, and military personnel do all the logistical work to operate the U.S. scientific field studies in Antarctica. Scientists must propose their research projects at least five years before they go. They must

Crews use heavy equipment for crevasse rescue training. Some of these operators later drove from McMurdo Station to the South Pole. TODD SWAIN

plan their logistical needs, including equipment, food, fuel, lodging, transportation, and support staff. Glacier teams ask for field safety coordinators or expert climbers, and they request support staffers who will feed, house, and equip them for their field trips. NSF therefore hires cooks, dishwashers, electricians, information technology experts, medical staff, plumbers, power plant operators, wastewater treatment plant employees, and many others.*

The fieldwork usually requires helicopters, which require air traffic controllers, cargo crew, mechanics, and pilots. If a science group is camping near its research site, group members need sleeping bags, tents, and all the other winter camping equipment for the coldest place on Earth. The Berg Field Center (BFC) staff at McMurdo Station issues all of this gear. The scientists analyze and test their field samples in the 46,000-square-foot Cray Lab at McMurdo.

In late summer 2016, a hiring official, Bija Sass, contacted me. Bija, a veteran at that time of fourteen seasons at McMurdo, described the station as an “industrial town” or a “mining town,” not some idyllic alpine village. Residential life she described as a strange cross between a college dorm and a retirement community. She did not promise that I could spend any time in the field away from McMurdo. Wilderness trips depended on what the scientists that season were doing. After an extensive interview, Bija offered me a job to start in late October and run through mid-February. I would spend the austral summer in Antarctica. Even though I said “yes,” I was quite conflicted; I badly wanted to go but also very much wanted to share the experience with Donette, who had not been offered a position.

I accepted the job and began the pre-qualification process, as they called it: medical and dental exams and reams of paper to complete about IT security, confidentiality, drug testing, safety equipment, and so forth. In the early 1980s, I had obtained my emergency medical technician certification while a member of the Mountain Rescue Service in North Conway, New Hampshire. I had maintained that EMT certification throughout the years and was thankful, because I needed it now.

Everything was moving along well when, less than two weeks to go before departure, two doctors gave my 90-year-old father a prognosis of “short weeks to live.” Antarctica was not to be in 2016. Donette and I spent the year helping

*For more on the life of seasonal workers in Antarctica, see *Appalachia* Winter/Spring 2010 for two articles about life “on the ice,” Christine Woodside, “Wanted: Austral Summer Workers,” 51 no. 1, pages 8–15; and Sally Manikian, “South Pole, North Country,” 51 no. 1, pages 16–28.

my folks move out of their home of 50 years and getting their affairs in order. As an only child, it was my obligation, and thankfully, Donette was there 100 percent.

My father recovered, and we reapplied for the 2017–2018 season. The NSF offered me a field safety coordinator job again; Donette would work for BFC. And then another wrinkle developed. In late July, Donette tore the meniscus root in her knee. Surgery fixed the problem, but there was no way she could pass the physical exam to go to Antarctica three months later. I was reluctant to go without my partner, but she insisted that I do. And so, in mid-October 2017, 40 years after meeting Marc Levesque, I landed on the sunny ice runway at McMurdo.

NSF HIRES AT LEAST FOUR OR FIVE FIELD SAFETY COORDINATORS EACH YEAR, adding others if more fieldwork enters higher-risk terrain. Our unit would be the U.S. Antarctic Program's search-and-rescue team. We would respond 24 hours a day, seven days a week, anywhere on the continent. Each of us would teach survival and field classes in skills such as setting up tents, making snow shelters, using GPS units, using a Gamow bag (in the event of altitude sickness), and glacier travel/crevasse rescue techniques. We also would monitor established travel routes on glaciers and sea ice for hazards and accompany field groups if they had to work near cliffs, crevasses, or the sea-ice edge.

Most mountaineers who work in Antarctica previously guided groups on such peaks as Mount Rainier or Denali. One of my coworkers had guided a client up Mount Everest. The search-and-rescue coordinator, John Loomis, had parachuted out of planes to rescue downed pilots, sometimes behind enemy lines, for the U.S. Air Force. He also had worked for the National Park Service as part of the rescue team at Denali National Park.

I knew practically nothing about how this amazingly complicated Antarctic program functioned. The first few weeks I drowned in information about policies, procedures, people's names, and the locations of offices and supplies. I also got some bad news two weeks after I'd arrived in Antarctica. Despite a stable prognosis, my 91-year-old father had died. My dad had always supported my adventures. When I'd first told him I would be working in Antarctica, he'd shaken his head and chuckled. "That'll be another chapter for your book," he said. After numerous conversations with my mother, Donette, and others, we decided I would stay through the season rather than return to New Hampshire, where my parents lived. So many of my colleagues in Antarctica missed their families' significant life events. If we left the ice for

births, deaths, weddings, and other milestones, we likely would not be able to return that season.

I headed out onto the sea ice for the first time about a week after I landed. I felt as if I had dropped into another world. I drove a snowmobile across a frozen ocean, knowing that the water below the ice measured hundreds or thousands of feet deep. I tried not to think about the fact that, despite the government's best efforts, various bulldozers, tractors, and trucks had broken through the sea ice in the past, sometimes killing workers.

The scientists needed to travel across the relatively flat sea ice to reach their research spots. We field safety coordinators examined these routes and marked them with flags, usually at 100-meter (about 91-yard) intervals. We monitored cracks in the ice, its thickness, and temperatures at various depths. We compiled all of this data into a weekly sea ice report distributed throughout the U.S. Antarctic Program and to the nearby New Zealand station, Scott Base. On my first trip onto the sea ice, I gained great insight into why we flag routes. As we headed back to McMurdo that day, visibility dropped to 100 yards or less. We could barely see from one flag to the next. Without the flags, we would have had to rely on a GPS unit to navigate. This is easier said than done from a snowmobile, wearing a helmet with a face shield while the spindrift blew horizontally at 50 miles per hour. If you were to lose the flag line and had no GPS or one with dead batteries, you'd have no idea where you were in this great expanse of white.

Each of my twenty trips onto the sea ice transported me into that surreal, frozen wonderland. At times, dozens of emperor or Adélie penguins surrounded us. They had no fear, waddling up to within a foot or two of us. We sometimes saw orcas or a minke whale swim by. On one trip, I helped scientists capture a seal and move it across open cracks in the sea ice to a safer spot for study. Beyond the edge of the sea ice lay the water, dark and deadly cold, just at the freezing point. I thought of what falling in might feel like. Our job was to keep scientists from tumbling in if they were gathering data at the ice's edge.

Five of my field assignments with researchers took us to the Dry Valleys. These valleys, across the sound from McMurdo, resemble some other planet. Consequently, all sorts of scientists study the valleys for clues about Mars and other distant orbs. In the harsh conditions of the Dry Valleys' glaciers and soils live microbial life forms that somehow survive.

One Dry Valley assignment was to the Wright Valley, home of Don Juan Pond. This small tarn is one of the most saline bodies of water on Earth.

It is so salty that it doesn't freeze, even during the long Antarctic winter when temperatures dip to 30 or 40 Fahrenheit below zero. Despite the high salinity, tiny creatures manage to live along the edges of the pond, somehow thriving in the extreme cold and six months of almost total darkness.

The scientific group I accompanied to Don Juan Pond was trying to determine why this body of water was so salty. The theory was that the salts were concentrating as they moved down the canyon walls toward the pond. To see if this theory was correct, the group contemplated descending the cliffs, scree, and talus from canyon rim to floor. We examined the lower half of the slope, which included a 200-foot-high cliff and nearly 1,500 feet of 30- to 50-degree angled terrain. After our reconnaissance visit, it was ultimately decided that sampling in less steep areas would achieve the same result.

Four more times, we accompanied research teams onto glaciers in the Dry Valleys—in all, five glaciers in three valleys. To prepare, we studied satellite and aerial images and previous trip reports, and we talked to people who had visited those areas. I developed a sense of what I might encounter, and I talked through various scenarios with the scientists before we left.

As we flew in the helicopter to the glacier, I spoke with the pilot. Sometimes the plane had to make several passes to make sure we would not land on top of a crevasse. This actually had happened a few years ago. A helicopter pilot landed on a glacier, stepped out of the helicopter, and immediately fell into a crevasse, where he died.

Once on the ground, policy required that we check communications with the helicopter before it departed. We also had to reconfirm our pickup time and location and that we had the appropriate number of survival bags with us. Once the helicopter departed, we were enveloped in complete and total silence. There were no birds chirping, no insects, no traffic sounds, and no jetliners flying overhead.



The GPS shows the circuitous flight pattern as the helicopter makes several attempts to find a safe landing place on the glacier. TODD SWAIN

Helicopters and field time are scarce resources, so after a quick review of safety issues and the work plan, we were off to get as much science done as possible.

As incredible an experience as I was having, I missed Donette. And to our great joy, a short-term field coordinator job opened up in early December. Donette had recovered from her knee injury and would have to go through the pre-qualification process fast. Early in January, she landed at McMurdo. We were both in Antarctica!

DONETTE IMMEDIATELY BEGAN THE EXTRAORDINARY TRAINING SCHEDULE we'd all done. She took a course in Antarctic field safety—one of the courses I taught—where we worked on how to make decisions in extreme conditions. She learned how to support scientists by issuing, repairing, and inventorying anything they might need in the field: stoves, sleeping bags, tents, ice drills, tables, coffee makers, radios, satellite phones, rock hammers, board games, food, sleds, extension cords, and more. Among the many skills she had to pick up quickly, Donette studied how to rig sling loads for helicopters to transport gear and waste from the field camps. The loads must hang under



Todd and Donette Swain on a trip to the sea-ice edge, where they assisted scientists who collected ocean water samples. COURTESY OF TODD SWAIN

the craft. She could attach a load of gear to a hook on the underside of a hovering helicopter for transport back to McMurdo.

One day, Donette and I accompanied a group of scientists to the sea-ice edge so that they would be safe. After determining the ice was thick enough, the helicopter landed. Donette and I established ice anchors to which we pre-rigged two haul systems. The scientists, Donette, and I all were tied in to the anchor. We were so busy that not until the last moment did we notice an orca swimming within 5 feet of us. It was a thrilling moment.

Everyone in McMurdo rooms with one to three roommates. Once Donette arrived, we shared a room. The bathrooms were between rooms or down hallways. We watched a couple news stations and movies on the large-screen television in the lounges. The lounges had slow satellite-run internet connections. Even downloading a newspaper to read later was a chore. That said, we were glad we could keep in touch with our families and friends by phone and internet.

Contrast this with what Marc Levesque experienced a few decades ago. VHS or Betamax tapes hadn't yet been invented, there was no internet, and the only communication with the outside world was via ham radio. I remember Marc telling me that he played a lot of ping-pong the year he wintered over.

We ate all our meals at McMurdo in a central dining hall. The galley crew numbered about 40 during the summer and prepared four meals per day. (In addition to the regular three meals, a meal is served at midnight for the night shift.) The food was varied and plentiful. We regularly ate meals with a wide variety of people—from scientists to construction workers to military members. There was always fascinating dinnertime conversation as people shared their unique and plentiful experiences from around the globe. The galley staff went all out for Thanksgiving and Christmas with a huge spread of traditional holiday fare and baked goods. On Thanksgiving, they cooked and served 900 pounds of turkey and 500 pounds of ham!

Not far from McMurdo, four explorer huts dating to the early 1900s still stand. Explorers such as Robert Falcon Scott and Ernest Shackleton used them. The huts are similar in size to some of the AMC huts in the White Mountains but more austere. The Discovery Hut, which stands a short walk from McMurdo, stocks something no AMC hut does: seal meat. The last occupants of the Discovery Hut killed seals for food, and because the conditions are so dry and cold, hundreds of pounds of the meat lie frozen on the floor.

We left McMurdo in February during the mad, controlled scramble of austral summer workers leaving and austral winter people arriving. The last flight before that dark winter closes in took off in mid-February. We left behind 50 or so who would live without outside support for the next several months.

We boarded a C-17 aircraft with Kiwis and Americans followed by a well-strapped-down helicopter returning to Christchurch, New Zealand. Somewhere over the ocean, we looked out the small windows of the plane, and I saw my first sunset in four months.

Family and friends frequently ask if we enjoyed our time in Antarctica. Our response has been that working at McMurdo was a dream come true. I owe a big thanks to Marc Levesque and AMC for kindling the idea oh-so-many years ago.

When TODD AND DONETTE SWAIN aren't on a climbing trip to some far-flung destination, they split their time between Joshua Tree and Bishop, California. Donette worked as an outdoor instructor before moving into the classroom and then becoming a principal. Todd worked as a climbing guide before becoming a ranger and then a special agent for the National Park Service. Both have written for *Appalachia* previously.